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THE DEMAND AND PRICE SITUATION FOR FOREST PRODUCTS, 1955

October 1954

6850

Table of Contents

	Page
Foreword	ii
Outlook Summary	1
The Demand and Price Outlook for Lumber	3
Source of lumber	7
Kind of wood	7
Production by region	7
Lumber prices	12
The Demand and Price Outlook for Pulpwood	12
Source of pulpwood	15
Kind of wood	15
Production by region	18
Pulpwood prices	19
The Demand and Price Outlook for Veneer Logs and Bolts	20
Production by region	20
Veneer log and bolt prices	20
Other Timber Products	22
Fuelwood	22
Mine timbers	22
Cooperage logs	22
Hewn ties	23
Poles and piling	23
Miscellaneous products	23
Naval Stores	23

6850

Foreword

This report was prepared as background information for the Outlook Conference of the U. S. Department of Agriculture, October 1954. The analysis of timber products was prepared by the Division of Forest Economics Research, Forest Service. The analysis of naval stores was prepared by the Tobacco Division, Commodity Stabilization Service.

This report includes brief discussions of past consumption and price trends for the various forest products and an estimate of the demand and price outlook in 1955. It is expected that future reports will contain a more detailed analysis of timber supply and probable future price trends.

The analysis in this report is based on certain assumptions for 1955, specified by the Agricultural Marketing Service, including no change in the level of construction activity, a continued high level of economic activity, and continued growth in population.

6850

Outlook Summary

Lumber

Lumber consumption during 1954 is estimated at 40.5 billion board feet or about the same as consumption in 1952 and 1953. In 1955 lumber consumption is expected to remain at about this level, primarily because no major changes are expected in construction and industrial activity during that year. Lumber imports estimated at 2.3 billion board feet in 1954 and lumber exports estimated at 0.9 billion board feet are not expected to change materially in 1955. Thus lumber production from domestic forests is expected to amount to about 39 billion board feet. The West is expected to account for about half of the lumber produced domestically, the South 35 percent, and the North 15 percent.

Lumber and stumpage prices have declined slightly in the last three years and in August 1954 lumber prices were about 4 percent below the all-time peak reached in 1951. No significant change in prices is anticipated during 1955.

Pulpwood

Pulpwood consumption in 1954 is estimated at 28 million cords -- about 2.7 percent higher than the previous peak year in 1953 and about 76 percent higher than consumption at the end of World War II. This does not include the equivalent of an estimated 10 million cords of pulpwood that will be imported in the form of wood pulp and paper and board. Some further increase in domestic pulpwood consumption is expected in 1955 in response to anticipated increases in population, pulp production, and the development of new uses for paper and pulp products. In addition, there will be considerable pressure to operate new plant facilities that are expected to increase the capacity of the wood pulp industry to about 22 million tons in 1955. This will represent an increase of about 1 million tons over capacity in 1954.

Production from domestic forests in 1955 is expected to be above the estimated 27 million cords produced in 1954. In 1955 the South is expected to account for about 60 percent of total production, the North 20 percent, and the West the remaining 20 percent. Pine and other preferred softwoods such as spruce and fir are expected to account for about 85 percent of total pulpwood production.

The new peak in pulpwood consumption achieved in 1954 marks a continuation of a period of extremely rapid growth in the pulp and paper industry. Since 1946 the capacity of the United States wood pulp industry has increased from 12.1 million tons to about 21 million tons -- or a rise of about 75 percent. Expansion of the pulp and paper industry and pulpwood consumption has been particularly rapid in the South where more than half of the wood pulp industry is now located. Except in the West, the wood pulp industry depends largely upon pulpwood cut from small forest holdings. In the South, for example, approximately three-fourths of total pulpwood production is cut from farm forests and other small ownerships.

Pulpwood prices have advanced steadily during the past decade or so, and in the past year have reached new peak levels. Some further slight increases may be expected as the pulp and paper industry continues to expand.

Veneer Logs and Bolts

Production of veneer logs and bolts during 1954, estimated at 2.6 billion board feet, is somewhat higher than prior years largely because of a trend toward increased use of softwood plywood in construction. This trend is expected to continue, andproduction and prices of these relatively high value products are expected to increase slightly in 1955.

Other Timber Products

In 1955 the consumption of all other forest products such as fuelwood, poles and piling, mine timbers, and other miscellaneous products, is expected to remain near the levels of consumption in 1954. Little if any price change is expected for these products.

Naval Stores

A gradual rise in prices for rosin and turpentine is expected during the remainder of 1954. During the current crop year ending March 31, 1955 increased rosin and turpentine requirements (offsetting, in the case of rosin, increased supplies) are expected to reduce year end stocks. Practically all of the loan rosin and much of the loan turpentine should be redeemed. It is anticipated that CCC reserve holdings of rosin will be called upon to supplement commercial availabilities.

The Demand and Price Outlook for Lumber

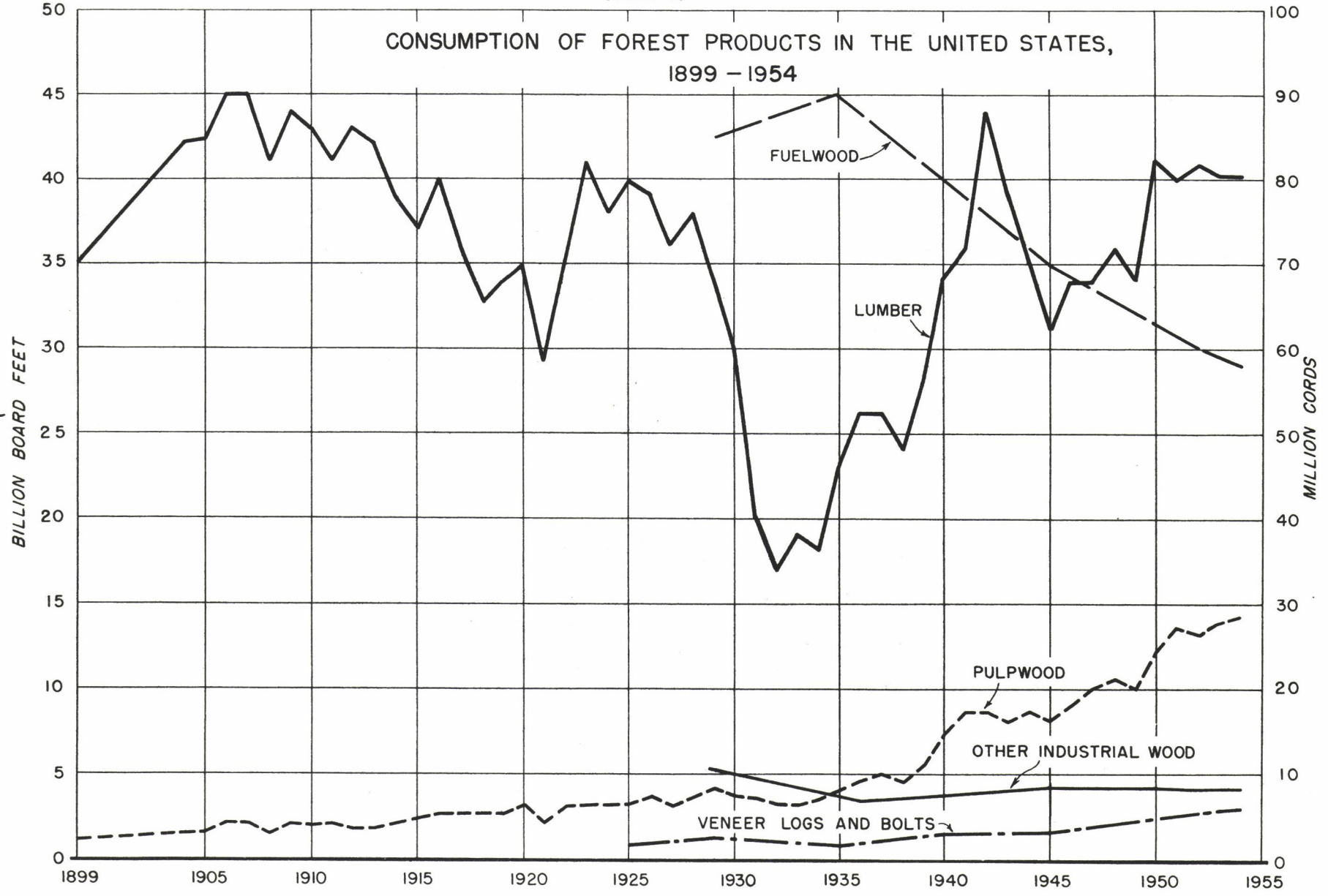
In 1954 it is estimated that some 40.5 billion board feet of lumber will be consumed in the U. S. In 1955 lumber consumption is expected to remain at this level primarily because no major changes are expected in construction and industrial activity during that year.

In 1906 (chart 1) during a period of rapid agricultural and industrial expansion, lumber consumption amounted to 45 billion board feet. Consumption declined after this date but recovered substantially during the construction boom of the middle 1920's. Consumption dropped off during the depression of the 1930's and climbed again to about 44 billion board feet in 1942. After a period of war-time restrictions, the post-war construction boom carried consumption to the present level of about 40 billion board feet.

Over the past few decades lumber has been displaced in part by other competitive materials, and some further substitution of other materials for lumber in a number of uses seems likely. In the field of construction, where the greatest amount of lumber is used, it has been displaced to a certain extent by such products as steel, cinder blocks, plywood and building boards. Total construction activity increased by about 57 percent between 1939 and 1952, for example, but use of construction lumber, increased only 37 percent, compared with increases of 100 percent for construction steel and cement; 200 percent for softwood plywood; and more than 1,000 percent for building board. Use of lumber in fabricated products and shipping has also been retarded as a result of competition from paper and board, plywood, and other materials. Nevertheless, some further increases in lumber consumption may be expected assuming continued population growth and increases in national income.

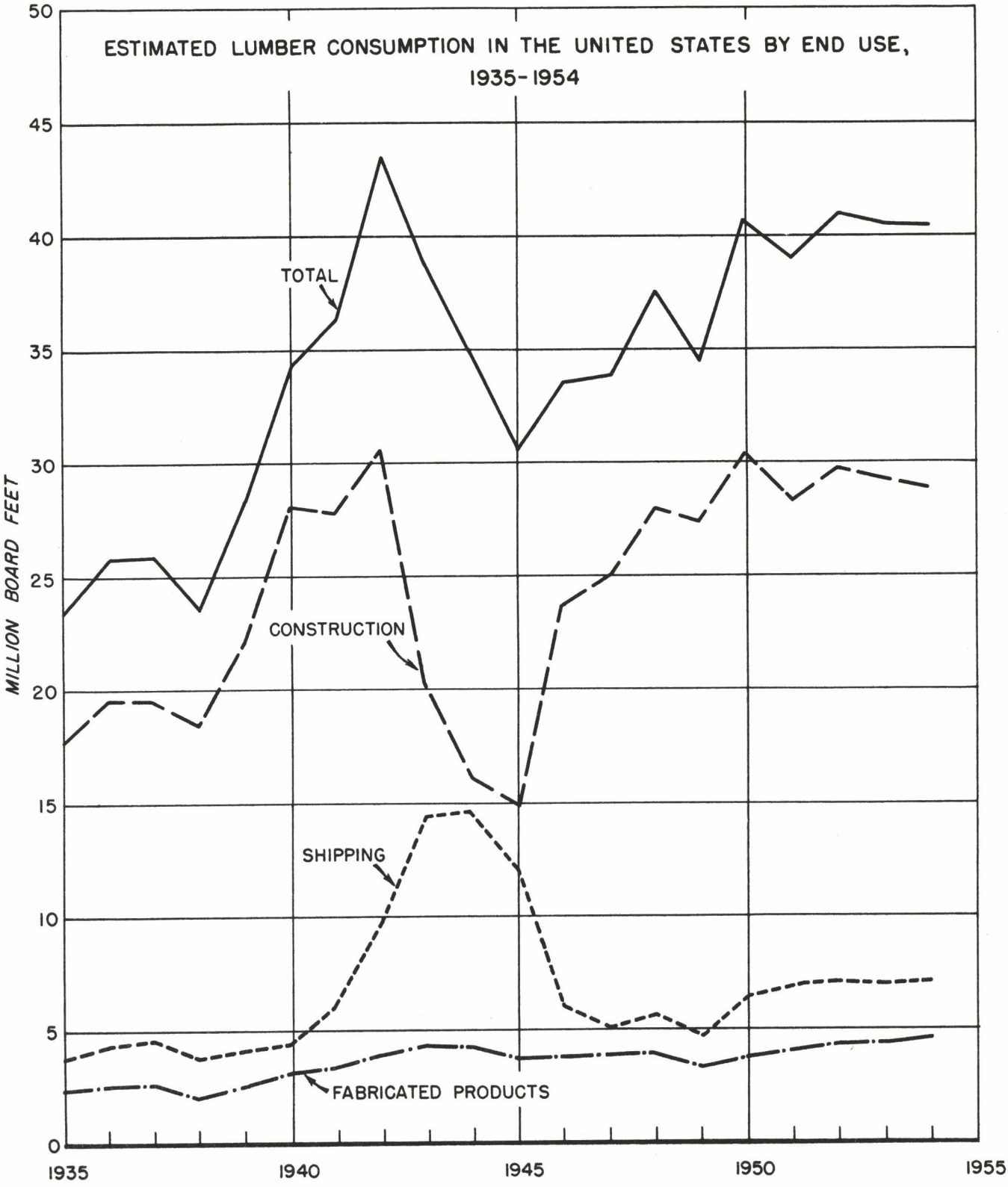
Construction has been the most important end use for lumber (chart 2). Current construction activity is at a record level (see tabulation below) with expenditures for construction in 1954 in 1947-49 dollars amounting to an estimated 29.7 billion dollars -- about 3 percent more than expenditures in 1953. Although construction may decline somewhat below previous peak years in the years immediately ahead, in the long run construction will undoubtedly expand in response to a growing population and prospective increases in national income.

Chart 1



SOURCE: Bureau of the Census, U. S. Department of Commerce and Forest Service, U. S. Department of Agriculture

Chart 2



SOURCE: Bureau of the Census, U.S. Department of Commerce and Forest Service, U.S. Department of Agriculture

New construction activity ($Billions, 1947-49 prices) 1/

Year	Total construction activity	New residential construction activity	New non-residential construction activity	All other new construction activity
1939	16.2	5.6	4.0	6.6
1940	16.9	6.3	3.5	7.1
1941	21.8	7.2	6.0	8.6
1942	22.9	3.9	7.2	11.8
1943	12.8	2.7	3.6	6.5
1944	8.2	1.5	2.9	3.8
1945	8.4	1.7	3.1	3.6
1946	15.5	5.7	5.0	4.8
1947	17.8	6.9	4.0	6.9
1948	20.8	8.3	4.7	7.8
1949	22.2	8.5	5.1	8.6
1950	26.9	11.9	5.9	9.1
1951	27.0	10.0	7.5	9.5
1952	27.7	9.9	7.7	10.1
1953	28.9	10.3	8.2	10.4
1954	29.7	10.4	8.6	10.7

Lumber use in residential construction, the largest single use of construction lumber, is not expected to show much change in 1955 or during the next few years. During the next few years the rate of formation of new households is expected to diminish as a result of the low birth rates of the depressed 1930's, but this tendency may be counter-balanced by such demand factors as the continuing movement of city population toward the suburbs, current high birth rates, and possible increases in incomes which will permit improvement in the general level of housing. Government policy to provide liberal credit or otherwise encourage housing construction is also likely to be an important factor.

Lumber consumption in farm and railroad construction is expected to remain near present levels during the next few years. Lumber consumption in other types of construction such as industrial, commercial, institutional, recreational, military and public utility, and in shipping and fabricated products may increase slightly over present levels, assuming that the national income rises and the U. S. continues to expand its industrial and military strength.

1/ Source: Department of Commerce, Business and Defense Services Administration.

Source of lumber

In recent years nearly all of the lumber consumed in the U. S. has been domestically produced and this situation is expected to continue. In the period 1947 through 1952, for example, lumber production in the U. S. averaged 36.9 billion board feet, imports 2.2 billion board feet, and exports 0.8 billion board feet (table 1). The net imports of 1.4 billion board feet amounted to about 4 percent of total lumber consumption during this period. Softwood lumber, from Canada, made up most of the lumber imports. Hardwoods from tropical countries, while important for some specialized uses accounted for only a small part of total lumber imports.

Kind of wood

Softwoods have constituted about 80 percent of all lumber used in the United States. Future markets should continue to be particularly strong for the major softwood lumber species such as Douglas fir and southern pine, since softwoods are preferred in most of the principal uses of lumber. In the period 1947 through 1952, for example, softwood lumber accounted for about 91 percent of the lumber used in construction and 68 percent of the lumber used in shipping. In the case of fabricated products, however, hardwoods made up 69 percent of the lumber used. In view of prospective increases in consumption for fabricated products and a declining softwood sawtimber resource, the demand for hardwoods seems likely to rise, particularly for high quality material.

Production by region 1/

Lumber production in the West has increased from about 3.5 billion board feet in 1900 to an estimated 20 billion board feet in 1954 (table 2 and chart 3). The present cut amounts to more than half of all the lumber produced in the U. S. and about two-thirds of the softwood lumber. Future increases in lumber production in this region are expected based primarily on resource availability since the West has nearly two-thirds of the total volume of sawtimber in the U. S.

In the South, lumber production during the immediate future may decrease slightly below the present level of 14 billion board feet (table 2 and chart 4), because of increasing problems of timber supply and increasing competition from the Pulp industry. Currently in this region the softwood sawtimber cut exceeds growth, and quality hardwoods are also becoming increasingly scarce. If forestry measures are intensified, however, the South has the capacity to support an increased cut of both lumber and pulpwood.

1/ The West includes the eleven western states and South Dakota. The South includes the twelve most southernly states including Virginia. The North includes all other states.

Table 1

Lumber production, imports, exports, and consumption in the United States for selected years 1899-1954

Year	Domestic production	Imports	Exports	Stock changes	Apparent consumption
	(Billion board feet)				
1899	35.1	0.4	1.4	na	34.1
1905	43.5	0.7	1.8	na	42.4
1910	44.5	1.1	2.2	na	43.4
1915	37.0	0.9	1.3	na	36.6
1920	35.0	1.4	1.7	na	34.7
1925	41.0	1.8	2.6	na	40.2
1930	29.4	1.2	2.4	na	28.2
1931	20.0	0.7	1.7	na	19.0
1932	13.5	0.4	1.2	na	12.7
1933	17.2	0.4	1.3	na	16.3
1934	18.8	0.3	1.3	na	17.8
1935	22.9	0.4	1.3	-1.3	23.3
1936	27.6	0.7	1.3	1.3	25.7
1937	29.0	0.7	1.4	2.4	25.9
1938	24.8	0.5	1.0	0.7	23.6
1939	28.8	0.7	1.1	-	28.4
1940	31.2	0.7	1.0	-3.4	34.3
1941	36.5	1.4	0.7	1.0	36.2
1942	36.3	1.5	0.5	-6.5	43.8
1943	34.3	0.9	0.3	-3.9	38.8
1944	32.9	1.0	0.4	-1.1	34.6
1945	28.1	1.1	0.4	-1.8	30.6
1946	34.1	1.2	0.6	1.2	33.5
1947	35.4	1.3	1.4	1.5	33.8
1948	37.0	1.9	0.6	1.9	36.4
1949	33.6	1.6	0.7	0.1	34.4
1950	38.0	3.4	0.5	0.2	40.7
1951	38.4	2.5	1.0	0.9	39.0
1952	39.4	2.5	0.7	0.2	41.0
1953	39.5	2.8	.6	1.2	40.5
1954	39.2	2.3	.9	.1	40.5

na - Not available.

Source data: Bureau of the Census, U. S. Department of Commerce; Forest Service, U. S. Department of Agriculture; and National Retail Lumber Dealers Association.

Table 2
Estimated lumber production in the United States by regions, and by hardwoods and softwoods, selected years 1899-1954

Year	Region								All regions		
	North			South			West				
	Hardwoods	Softwoods	Total 1/	Hardwoods	Softwoods	Total 1/	Total 2/		Hardwoods 1/	Softwoods 1/	Total 1/
	(Billion board feet)										
1899	6.6	12.0	18.6	2.3	10.7	12.9	3.5		8.9	26.2	35.1
1905	7.3	12.8	20.1	3.3	13.3	16.5	6.9		10.5	33.0	43.5
1910	7.5	8.0	15.6	2.9	17.1	20.0	8.9		10.5	34.0	44.5
1915	4.7	5.3	10.0	2.8	16.0	18.8	8.2		7.5	29.5	37.0
1920	3.8	3.0	6.9	3.5	12.5	16.0	12.1		7.4	27.6	35.0
1925	3.6	2.5	6.0	4.1	15.5	19.6	15.3		7.7	33.3	41.0
1930	2.9	1.6	4.5	3.2	9.4	12.6	12.2		6.1	23.3	29.4
1935	2.4	1.5	3.8	2.3	7.7	10.0	9.1		4.7	18.2	22.9
1940	2.9	1.7	4.6	2.6	10.7	13.3	13.2		5.5	25.7	31.2
1941	3.3	2.0	5.3	3.3	12.2	15.5	15.7		6.6	29.9	36.5
1942	3.2	2.0	5.1	3.6	12.0	15.6	15.6		6.8	29.5	36.3
1943	3.2	1.7	4.9	4.2	10.2	14.3	15.0		7.4	26.9	34.3
1944	3.5	1.9	5.4	4.3	8.3	12.6	15.0		7.8	25.2	32.9
1945	2.8	1.7	4.5	4.1	7.4	11.5	12.1		7.0	21.2	28.1
1946	4.7	2.6	7.3	5.1	9.6	14.7	14.4		9.8	26.6	36.4
1947	3.4	2.0	5.4	4.0	9.6	13.6	16.3		7.4	28.0	35.4
1948	3.4	2.6	6.0	4.0	9.2	13.2	17.8		7.4	29.6	37.0
1949	2.6	1.5	4.1	3.1	8.5	11.6	16.5		5.7	26.5	32.2
1950	3.0	2.0	4.9	4.4	10.2	14.6	18.6		7.4	30.7	38.0
1951	3.2	2.0	5.2	4.8	9.2	14.0	19.3		8.0	30.4	38.4
1952	3.4	1.9	5.3	4.5	9.6	14.1	19.9		8.0	31.4	39.4
1953	3.4	2.0	5.4	4.8	9.2	14.0	20.1		8.0	31.5	39.5
1954	3.1	2.1	5.2	4.7	9.3	14.0	20.0		7.8	31.4	39.2

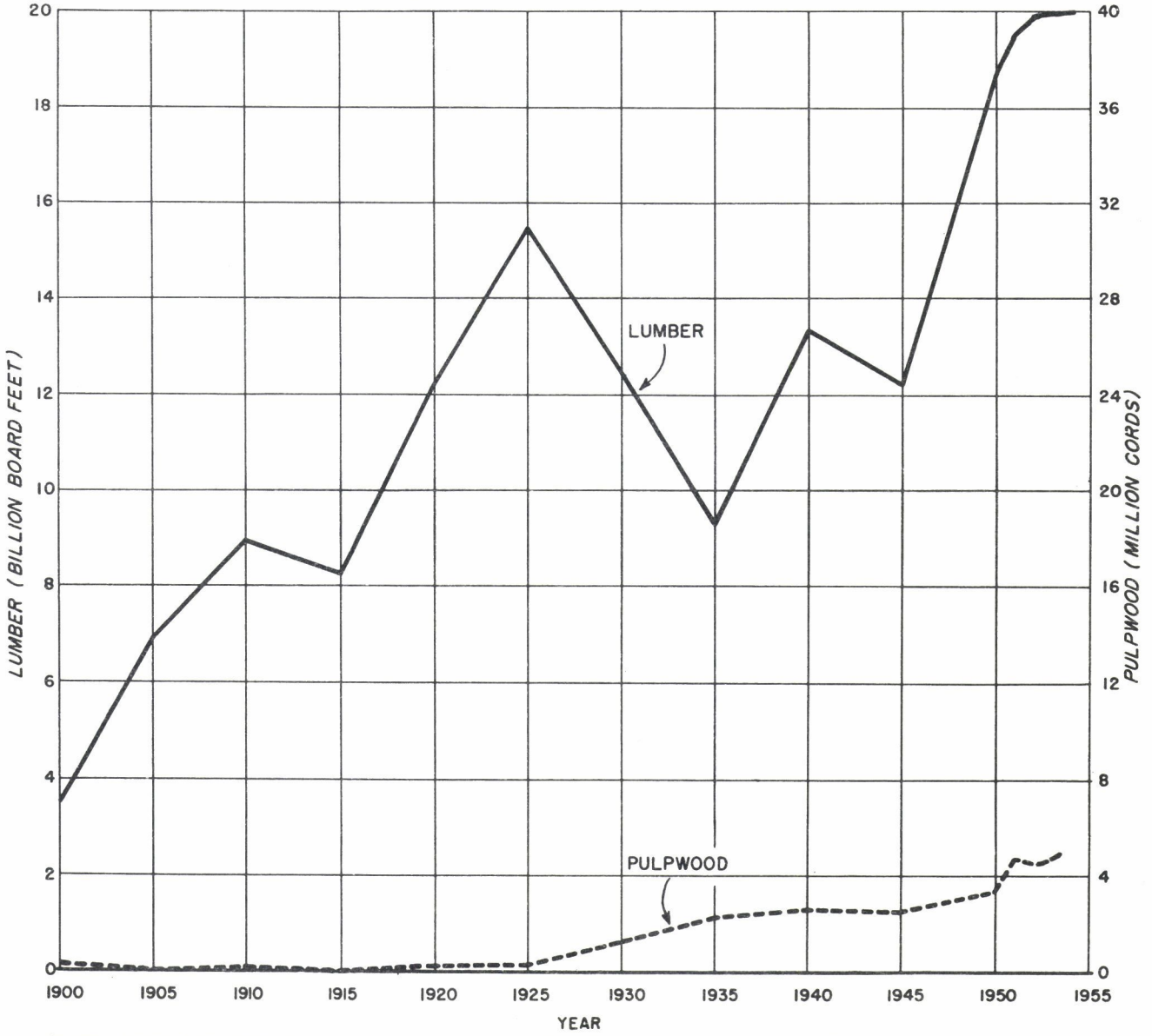
1/ Data do not necessarily add to total because of rounding.

2/ Primarily softwoods; includes small quantities of hardwoods usually amounting to less than 50 million board feet per year.

Source: Bureau of the Census, U. S. Dept. of Commerce, and Forest Service, U. S. Dept. of Agriculture.

Chart 3

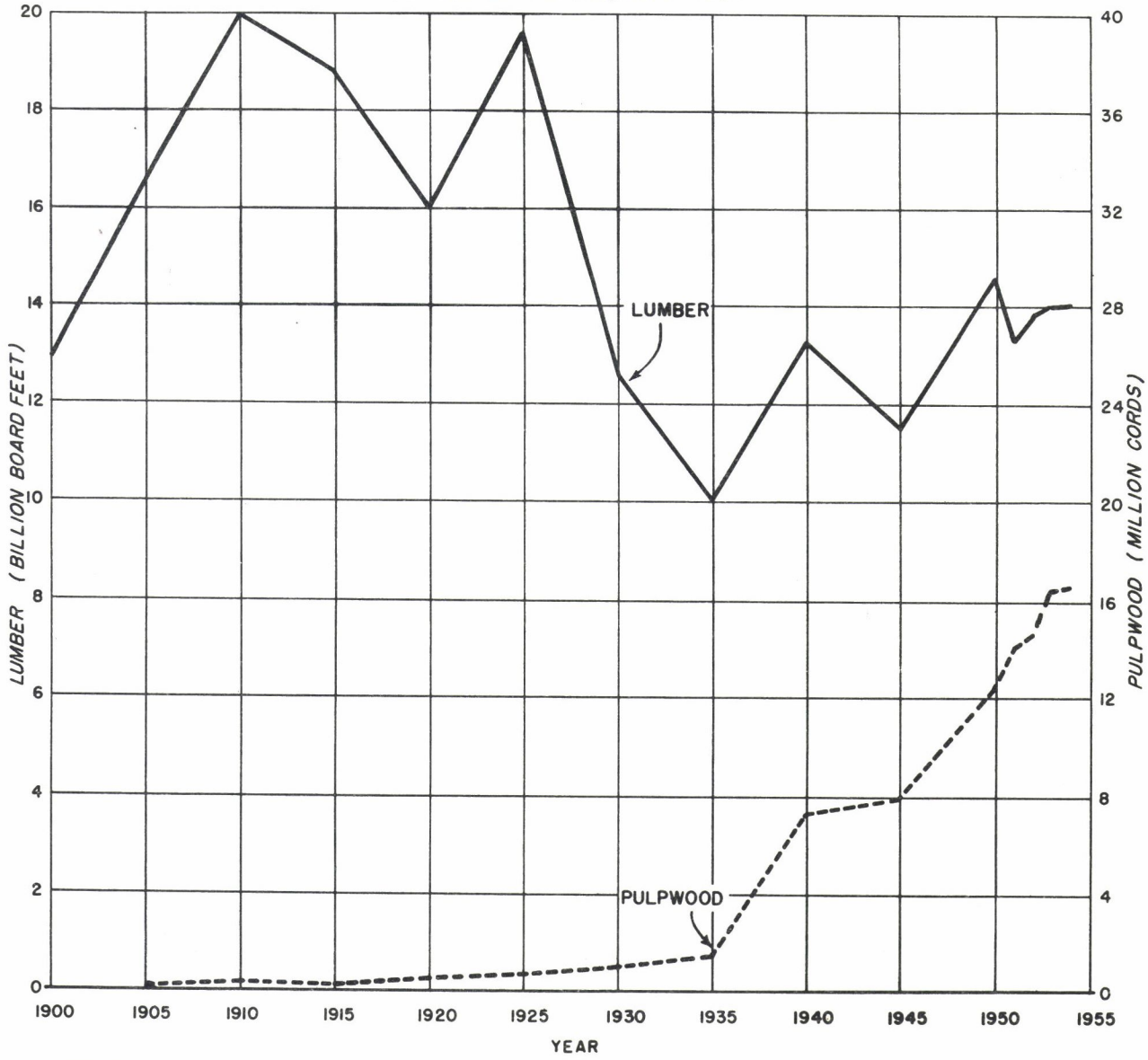
LUMBER AND PULPWOOD PRODUCTION IN THE WEST
SELECTED YEARS, 1900-1954



SOURCE: Bureau of the Census, U. S. Department of Commerce and Forest Service, U. S. Department of Agriculture

Chart 4

LUMBER AND PULPWOOD PRODUCTION IN THE SOUTH, SELECTED YEARS, 1900-1954



SOURCE: Bureau of the Census, U. S. Deparment of Commerce and Forest Service, U. S. Department of Agriculture

Fifty years ago, the North provided half of all the lumber produced in the country, but in 1954 will account for an estimated 13 percent of the U.S. total (table 2 and chart 5). Future production of hardwood lumber in this region seems likely to increase.

Lumber prices

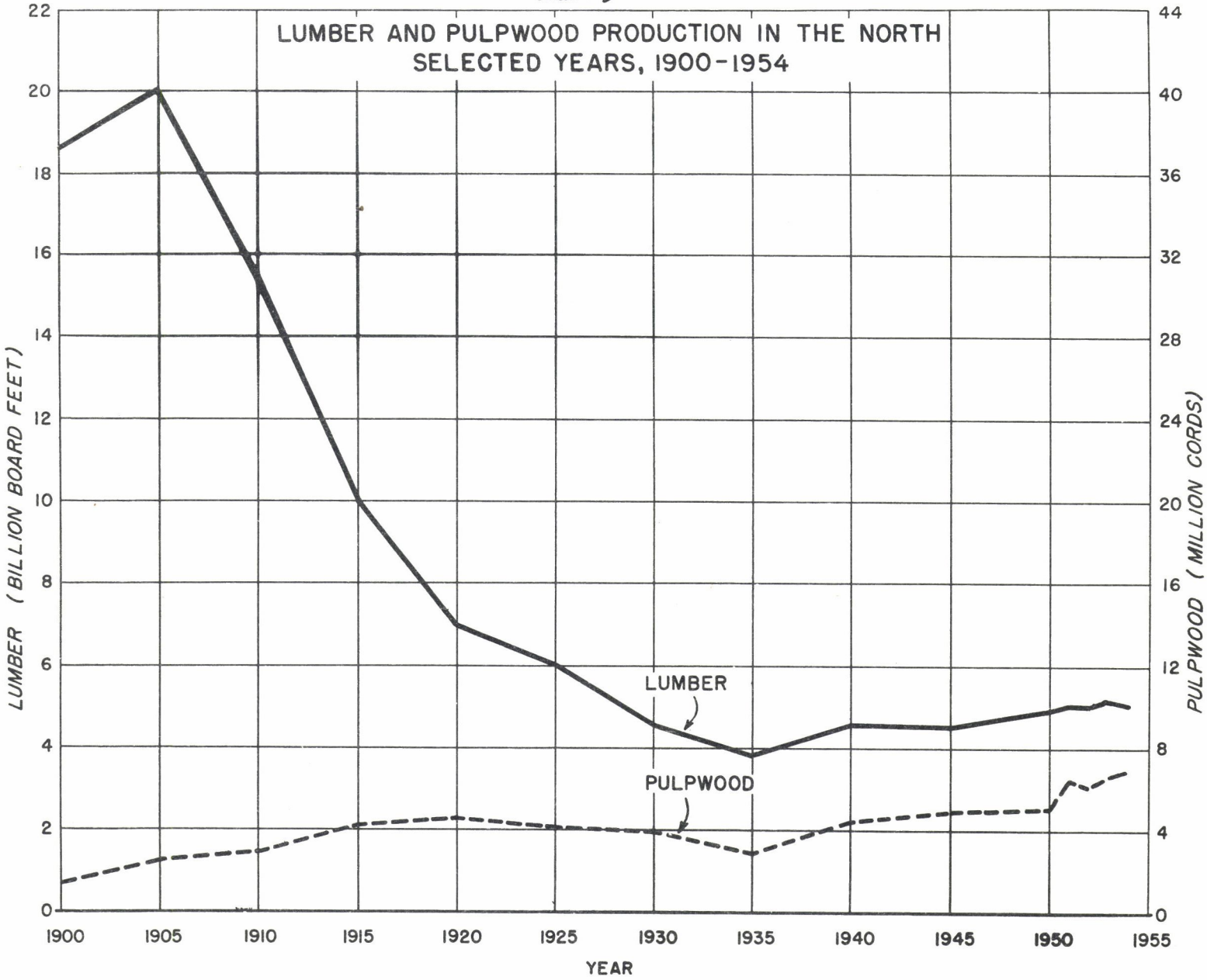
Lumber and stumpage prices are expected to show little change in 1955, in view of expectations concerning levels of economic activity. During the period 1926 through 1953 the price of lumber increased by about 260 percent climbing from a wholesale price index of 33.2 (1947-49 = 100) in 1926 to 119.3 in 1953 (chart 6). In the last three or four years, however, the wholesale price index of lumber has not shown much change fluctuating from a high of 123.6 in 1951 to a low of 115.4 in June of 1954. Since June 1954 the lumber market has strengthened and during August, the wholesale price index of lumber stood at 118.7.

The rise in lumber prices that has occurred since 1926 has resulted from a number of factors. Wage rates, for example, have increased more rapidly in the lumber industry than in many other industries and have tended to cause an increase in the price of lumber relative to other commodities. With the diminishing availability of accessible timber of desirable marketable quality, it has been necessary to utilize the smaller and poorer quality trees which require more man-hours and equipment time per unit of lumber produced. In addition, it has been necessary to shift logging operations into more remote regions with difficult terrain, with consequent increases in transportation and logging costs. Competition has raised prices of standing timber and increased costs to mills dependent upon purchased timber.

The Demand and Price Outlook for Pulpwood

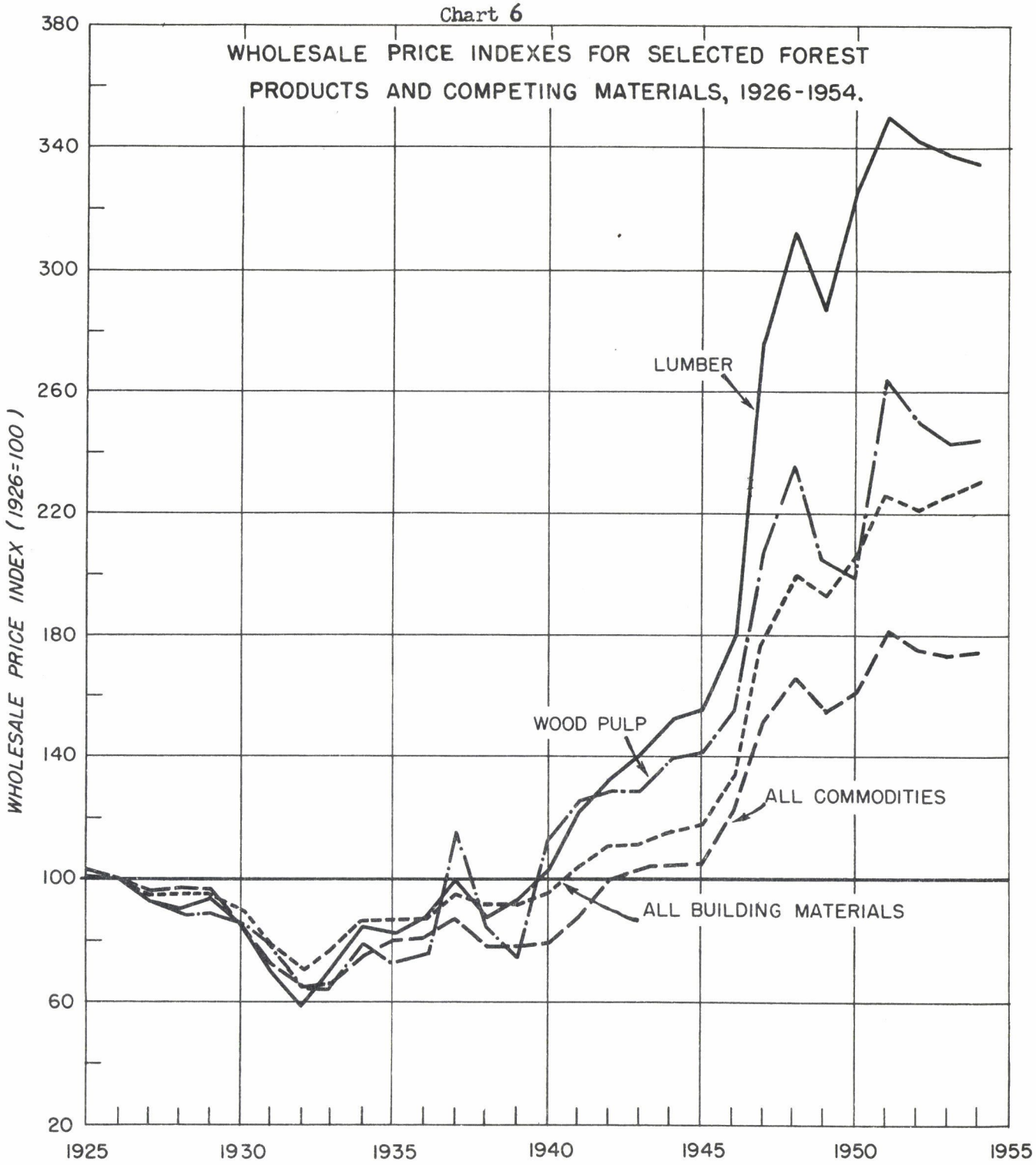
In 1954 it is estimated that some 28 million cords of pulpwood will be consumed in the U. S. In 1955 pulpwood consumption is expected to be somewhat above the 1954 level. In addition it is expected that imports of pulp and paper will continue at about the present levels amounting to an estimated 2 million tons of wood pulp and 5 million tons of paper and board or the equivalent of about 10 million cords of pulpwood.

Chart 5



SOURCE: Bureau of the Census, U. S. Department of Commerce and Forest Service, U. S. Department of Agriculture

Chart 6



SOURCE: Bureau of Labor Statistics, U. S. Department of Labor

Pulpwood consumption, in response to the phenomenal growth of the pulp and paper industry, has shown a tremendous expansion in the past three decades, rising from about 6 million cords in 1920 to about 28 million cords in 1954 (table 3).

Pulpwood has now reached a point where it is second only to lumber among the various forest products cut in the U. S. Current trends along with anticipated increases in population and national income, and the development of new uses of paper and pulp products indicate a continuation of rapid increases in consumption. In addition, there are some factual data on planned expansion within the pulp industry which tend to confirm these expectations. For example, according to a survey conducted by the U. S. Pulp Producers Association, plant facilities now under construction or planned are expected to increase the capacity of the wood pulp industry to about 22 million tons in 1955. This represents an increase of about 1 million tons over capacity in 1954. In the long run there is every indication that the pulp and paper industry will continue to expand and that pulpwood consumption will increase rapidly.

Source of pulpwood

Domestic forests will be called upon to supply most of the new demand for pulpwood in 1955. As shown in table 3 most of the pulpwood consumed in the U. S., during recent years has been produced from domestic forests. In 1953, for example, production from domestic forests amounted to 26.3 million cords and net imports 1.5 million cords. These imports, mostly softwoods from Canada made up about 5 percent of the pulpwood used during that year. In 1900 pulpwood imports accounted for about 20 percent of the pulpwood used. Future imports of pulpwood and of pulp and paper are expected to remain at about present levels.

Kind of wood

The consumption of softwood pulpwood is expected to increase in 1955. Southern pine, hemlock, Douglas-fir, spruce and fir will be most in demand. These species along with some other minor softwood species have long been the source of most of the pulpwood used for pulp and paper manufacture in this country (table 4). In 1954, softwoods made up about 82 percent of the total pulpwood cut. In the South, softwoods comprised 86 percent, in the North 57 percent, and the West almost 100 percent of the pulpwood produced.

Table 3

Production, net imports, and apparent consumption of pulpwood, wood pulp, and paper and board in the United States, for selected years 1899-1953

Year	Pulpwood			Wood pulp			Paper and board		
	Production	Net imports	Apparent consumption 1/	Production	Net imports	Apparent consumption 1/	Production	Net imports	Apparent consumption 1/
	(Million cords)			(Million short tons)					
1899	1.6	.4	2.0	1.2	--	1.2	2.2	--	2.2
1904	2.5	.6	3.1	1.9	.2	2.1	3.1	--	3.1
1909	3.2	.8	4.0	2.5	.4	2.9	4.1	--	4.1
1914	3.6	.8	4.5	2.9	.7	3.6	5.2	.2	5.4
1920	5.0	1.1	6.1	3.8	.9	4.7	7.2	.5	7.7
1925	5.0	1.1	6.1	4.0	1.6	5.6	9.0	1.4	10.4
1930	6.1	1.1	7.2	4.6	1.8	6.4	10.2	2.1	12.3
1935	6.6	1.0	7.6	4.9	1.8	6.7	10.5	2.3	12.7
1941	14.2	2.2	16.4	10.4	.8	11.2	17.8	2.7	20.4
1942	14.9	2.2	17.1	10.8	.9	11.6	17.1	2.7	19.8
1943	13.6	1.7	15.3	9.7	1.0	10.7	17.0	2.4	19.4
1944	15.3	1.6	17.0	10.1	.9	11.0	17.2	2.3	19.4
1945	15.3	1.7	16.9	10.2	1.6	11.8	17.4	2.3	19.7
1946	17.0	1.9	18.9	10.6	1.8	12.4	19.3	3.2	22.5
1947	18.5	2.0	20.5	11.9	2.2	14.1	21.1	3.6	24.8
1948	20.0	2.3	22.3	12.9	2.1	15.0	21.9	4.2	26.1
1949	17.6	1.6	19.3	12.2	1.6	13.8	20.3	4.4	24.7
1950	20.7	1.8	22.5	14.8	2.3	17.1	24.4	4.6	29.0
1951	25.1	2.6	27.7	16.5	2.2	18.7	26.0	4.5	30.6
1952	25.1	2.3	27.3	16.5	1.7	18.2	24.4	4.6	29.0
1953	26.3	1.5	27.8	17.5	2.0	19.5	26.6	4.8	31.4

1/ Data do not necessarily add to total because of rounding.

Source: Bureau of the Census, U. S. Department of Commerce, and Forest Service, U.S. Dept. of Agriculture.

Table 4

Estimated pulpwood production in the United States by regions, and by hardwoods and softwoods, selected years 1899-1954

	Region								All regions		
	North			South			West				
	Hardwoods	Softwoods	Total 1/	Hardwoods	Softwoods	Total 1/	Total 2/		Hardwoods 1/	Softwoods 1/	Total 1/
	Million Cords										
1899	.5	1.0	1.4	--	--	--	.2		.5	1.2	1.6
1905	.4	2.1	2.5	--	.1	.1	--		.4	2.1	2.5
1910	.7	2.1	2.8	.1	.1	.3	.1		.8	2.3	3.1
1916	.6	3.6	4.2	.2	.1	.2	--		.7	3.7	4.4
1920	.5	4.0	4.5	.3	.1	.4	.2		.8	4.3	5.0
1925	.4	3.7	4.1	.3	.3	.6	.3		.7	4.3	5.0
1930	.4	3.5	3.9	.4	.5	1.0	1.2		.8	5.3	6.1
1935	.3	2.6	2.9	.6	.9	1.4	2.2		.9	5.7	6.6
1941	1.1	3.3	4.4	.7	6.4	7.2	2.6		1.8	12.3	14.2
1942	1.2	3.8	5.0	.7	6.6	7.3	2.6		1.9	13.0	14.9
1943	1.1	2.9	4.0	.7	6.5	7.1	2.5		1.8	11.8	13.6
1944	1.0	3.5	4.6	1.0	7.2	8.2	2.6		2.0	13.4	15.3
1945	1.1	3.8	4.9	1.0	6.8	7.9	2.5		2.1	13.1	15.3
1946	1.3	4.2	5.5	1.2	7.6	8.8	2.6		2.6	14.4	17.0
1947	1.4	4.3	5.7	1.2	8.1	9.2	3.6		2.5	16.0	18.5
1948	1.2	4.2	5.4	1.3	10.1	11.4	3.3		2.5	17.5	20.0
1949	1.3	3.3	4.6	1.0	9.0	9.9	3.1		2.3	15.3	17.6
1950	1.7	3.3	5.0	1.3	11.2	12.4	3.3		2.9	17.8	20.7
1951	2.2	4.2	6.4	1.6	12.4	14.1	4.7		3.8	21.3	25.1
1952	1.9	4.0	5.9	1.7	13.0	14.7	4.5		3.7	21.4	25.1
1953	2.4	3.2	5.6	2.0	14.1	16.1	4.5		4.4	21.9	26.3
1954	2.5	3.3	5.8	2.3	14.2	16.5	4.7		4.8	22.2	27.0

1/ Data do not necessarily add to totals because of rounding.

2/ Softwoods only.

Source: Bureau of the Census, U. S. Dept. of Commerce, and Forest Service, U. S. Dept. of Agriculture.

Softwoods are generally preferred for pulping since softwood fibers are longer than hardwood fibers (on the average about 1/8-inch compared to 1/25-inch long for hardwood fibers) and so are more satisfactory in grades of paper where strength is important. The development of a pulping process suitable for the reduction of resinous woods (the sulphate process) also has lent tremendous impetus to the rise in importance of softwood species for pulping particularly in the South.

Consumption of hardwood pulpwood however is also expected to increase substantially in the future. While the proportion of hardwoods in the total cut of pulpwood has not changed appreciably, the quantity produced has continued to increase rising from about 0.8 million cords in 1920 to about 4.8 million cords in 1954.

Increases in the consumption of hardwoods will be encouraged by the declining availability of softwood timber resources of the U. S. This will be particularly true in the North where the stands of preferred softwoods such as spruce and fir have long been inadequate to meet the demands of the pulp industry located there. Advances in semi-chemical pulping of hardwoods, will also tend to increase use since the pulps thus produced are finding wide use in various types of boards and to some extent in papers.

Production by region

Pulpwood production in the South, the nation's most important pulp producing region, is expected to increase in 1955. In this region pulpwood production to supply the rapidly growing pulp industry located there has increased from about 1 million cords in 1930 to an estimated 16.5 million cords in 1954 (table 4 and chart 4). The present cut of pulpwood is equivalent to more than half of the volume of sawlogs produced in this region and about a quarter of the total timber cut for all products including fuelwood. To an increasing extent the same sizes and species of timber are utilized for lumber and pulpwood in the South.

The rapid growth of the pulp and paper industry in the South and expected future expansion is based upon a number of favorable factors prevailing in this region. These include good location with respect to markets, reasonable security of future raw material supplies based upon rapid tree growth, ample supplies of labor, year-long woods work and comparatively easy logging conditions, availability of water, chemicals and power, and excellent transportation facilities.

The South is faced with a declining softwood sawtimber supply in many areas. Effects of timber shortages will be less serious on the pulp industry than on the lumber industry because of stronger bargaining power and ability to use lower grade material.

Pulpwood production is also expected to increase in the West in 1955. Pulpwood production in this region has increased from about 0.3 million cords in 1925 to an estimated 4.7 million cords in 1954 (table 4 and chart 3). Expectations concerning future increases in production in this region are based primarily on the availability of forest resources to support expansion of the pulp and paper industry. Western forests, although amounting to less than one-fourth of the total commercial forest area, contain about one-half of the cubic volume of timber in the United States. This region also has large quantities of concentrated mill waste suitable for pulp manufacture.

Pulpwood production in the North is not expected to change much from present levels in the next few years. The production of hardwood pulpwood, however, may increase and softwood decline. Fifty years ago, the North supplied nearly all of the pulpwood produced in the United States and as late as the early 1930's supplied more than half the cut (table 4 and chart 5). Since then production has increased rather slowly and the region has declined in importance as a producing region. This reflects the local depletion of softwood timber resources, consequent high costs of raw materials and other factors such as stream pollution problems. There are increasingly large volumes of second-growth hardwood timber in this region, however, and if the pulp industry continues a trend toward conversion to hardwoods the cut from the hardwood forests may rise considerably.

Pulpwood prices

Pulpwood prices are expected to show little if any change in 1955. Pulpwood prices as measured by the wholesale price index of wood pulp (see chart 6) have experienced a slower rise than lumber prices primarily because the less demanding timber requirements of the pulp industry have eased the raw material supply situation. In the future, however, as competition for available timber increases, prices are likely to rise somewhat, particularly in the South where so much of the pulp and lumber industry is located.

The Demand and Price Outlook for Veneer Logs and Bolts

In 1954 it is estimated that some 2.6 billion board feet of veneer logs and bolts will be consumed in the United States. In 1955 veneer log and bolt consumption is expected to increase slightly to 2.7 billion board feet.

Since 1925 consumption of veneer logs and bolts in the United States has increased from 0.7 billion board feet to 2.6 billion board feet--an increase of 271 percent (chart 7). Most of this increase has been in the consumption of softwood veneer logs which rose from 0.2 billion board feet in 1925 to an estimated 1.6 billion board feet in 1954. The consumption of hardwood veneer logs during this same period increased from 0.5 billion board feet to about 1 billion board feet.

Most of the expected increase will be for softwood veneer logs and bolts, as the result of anticipated increases in the use of softwood plywood in construction--the use which so largely caused the rapid increase in consumption after 1925. Softwood plywood consumption is also expected to increase in shipping and in fabricated products. In addition, a modest increase is expected in the consumption of hardwood veneer logs in response to the anticipated increase in the general level of economic activity.

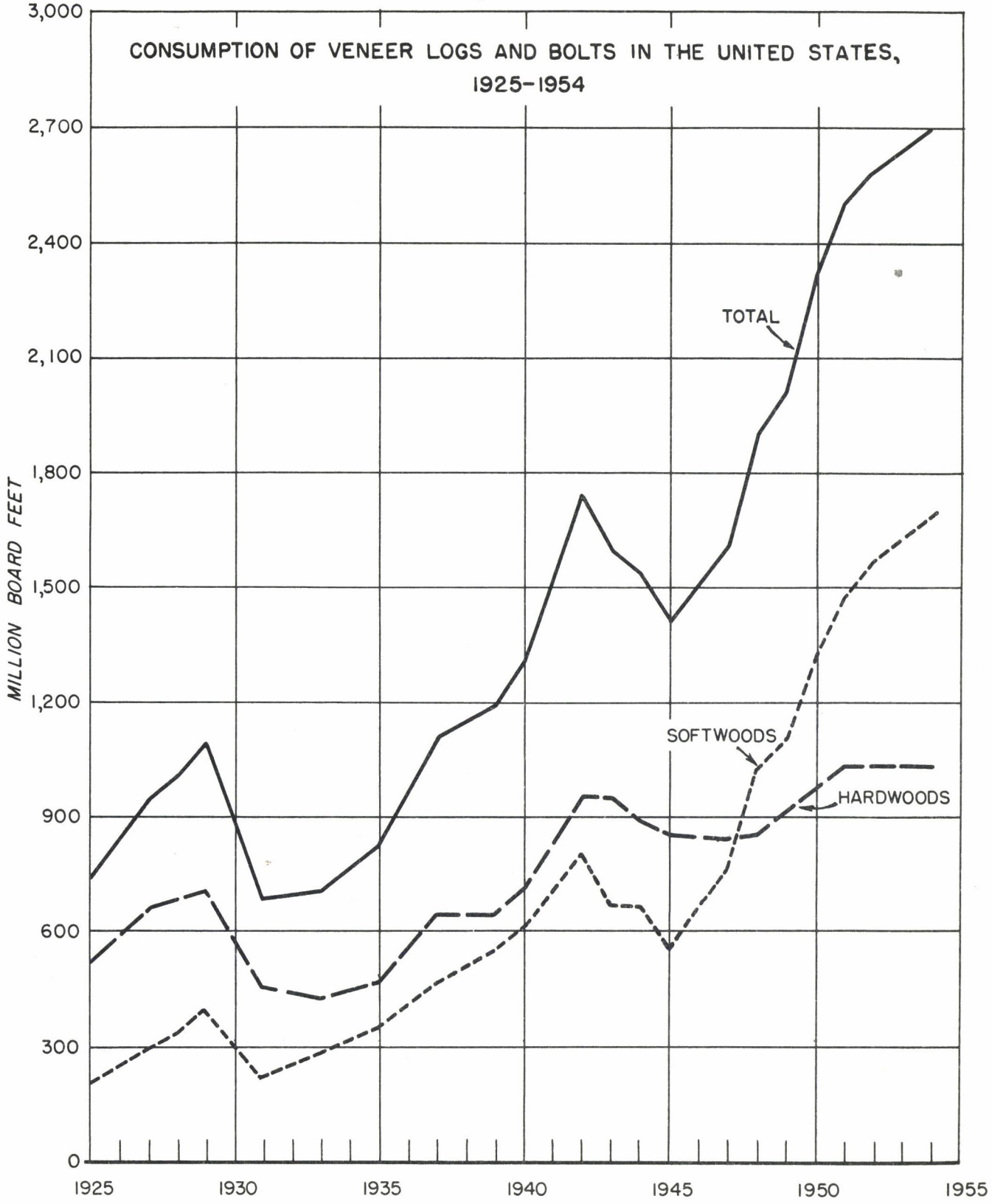
Production by region

Regionally the production of veneer logs and bolts is localized since almost all of the softwood veneer logs and bolts are produced in the West while the hardwoods are produced in the North and South. Only small quantities of veneer logs and bolts, chiefly specialty hardwoods are imported into the United States.

Veneer log and bolt prices

Veneer log and bolt prices both for softwoods and hardwoods are expected to rise slightly in 1955. The general trend of prices is likely to be upward for the next few years primarily because of a growing scarcity of high quality timber which is needed for veneer manufacture. Depending on the ability of the industry to use a wider variety of species and to make commercial veneer from smaller and lower grade logs prices may be held down to some extent.

Chart 7



SOURCE: Bureau of the Census, U.S. Department of Commerce and Forest Service, U.S. Department of Agriculture

Other Timber Products

In 1955 the consumption and prices of all other timber products are expected to remain unchanged from present levels. Looking further ahead, however, some changes in consumption seem likely.

Fuelwood

The consumption of fuelwood for domestic use in 1954 is estimated at about 30 million cords. An additional 30 million cords was used for industrial purposes. The level of domestic fuelwood consumption in 1954 represents less than half of that prevailing 50 years ago as a result of the use of more convenient and efficient fuels, such as coal, oil, gas and electricity. With respect to the future, high income levels, the increasing use of gas and oil, and rural electrification are expected to cause a further decline in the domestic use of fuelwood.

Mine timbers

In 1954 the mines of the United States will use an estimated 90 million cubic feet of round, split and hewn mine timbers. This level of consumption is only about half what it was in the 1920's as the result of substitution of sawn timbers, concrete and steel, and changes in mining practices. In view of expected increases in coal and ore production some slight increases in the use of mine timbers is expected in the future.

Cooperage logs

In 1954 it is estimated that about 350 million board feet of logs and bolts were used by the cooperage industry and little change is expected in 1955. Use of wood for cooperage has been declining rapidly during the past three decades as a result of the substitution of steel and fiber, the use of other types of containers, and the decreasing availability of high quality oak timber. In the future some further slight decline is expected in the consumption of cooperage logs.

Hewn ties

In 1954 it is estimated that about 8 million hewn ties, representing about one-quarter of the total number of cross ties installed, will be used by railroads in the United States. Hewn ties are produced chiefly in the South of southern yellow pine and oak timber. The 1954 level of hewn tie consumption, however, represents only about one-fifth of the level which prevailed during the 1920's, due primarily to substitution of sawn for hewn ties. The general downward trend in consumption of hewn ties is expected to continue while the consumption of sawn ties is expected to increase. In 1954 it is estimated that about 31 million sawn ties will be installed by U. S. railroads.

Poles and Piling

In 1954 it is estimated that about 6 million utility poles and 40 million linear feet of piling will be used in the United States. No change in consumption is expected in the near future.

Miscellaneous Products

In the aggregate, it is estimated that in 1954 consumption of shingle logs, turnery logs and bolts, small dimension, farm timbers, distillation wood, and other miscellaneous products amounted to about 235 million cubic feet of wood. While no change in consumption seems likely in 1955, use of these products in subsequent years may be expected to increase assuming a higher level of economic activity.

Naval Stores

The market situation which strengthened initially in August 1953 is expected to continue strong at least through the remainder of the current crop year ending March 31, 1955. An orderly price rise is anticipated for the next several months. Prices of turpentine and, especially, of rosin during the second half of the crop year should average higher than for the first half.

If demand continues near present levels, as expected, virtually all of the rosin and much of the turpentine collateral pledged to the 1954 Gum Naval Stores Loan Program will be redeemed. As individual grades of rosin loan collateral are liquidated, it is expected that CCC rosin holdings (acquired under prior programs) will be called upon to meet demand, particularly in the pale grades.

Supply

Crop Year 1954. The supply of rosin during the current crop year is estimated at 3,019,000 drums, about two percent above last year (figure 8 and table 5). An estimated 5 percent increase approximating 100,000 drums in output of all types of rosin more than offsets the 34,000 drum reduction in carry-in stocks. Output of both steam distilled wood rosin and tall oil rosin probably will be above last year. Production of gum naval stores is slightly ahead of last year's output at the end of August; nevertheless, it is expected ultimately to fall slightly below 1953 output. The severe drought, particularly in Georgia, has adversely affected gum yields.

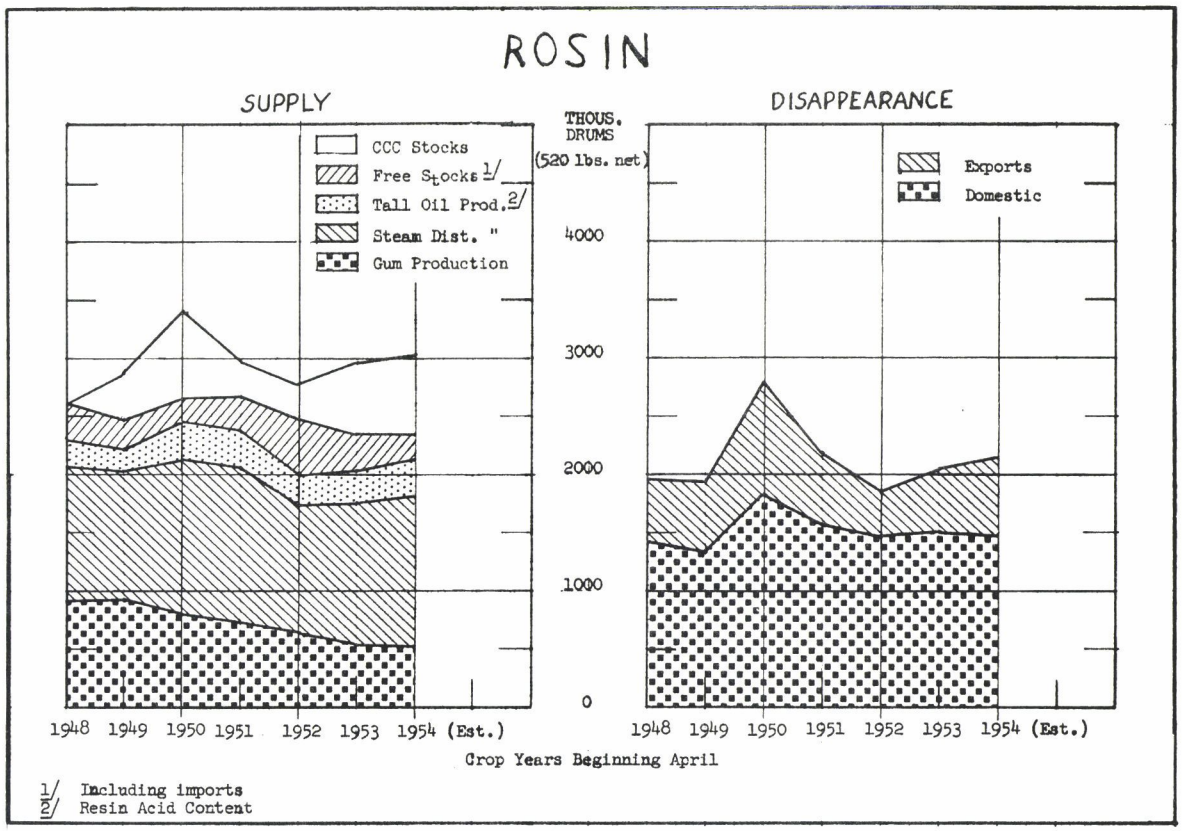
The supply of turpentine is estimated at 790,000 barrels, virtually unchanged from last year. Lower carry-in stocks of 197,000 barrels (compared with 229,150 last year) should be offset by a 7 percent increase in overall output to 574,000 barrels, represented mainly by a 22 percent increase in sulphate wood turpentine production.

It is anticipated that the effect of the drought on the trees will be such as to further curtail gum rosin and gum turpentine output during the 1955 crop year. Because an increase is anticipated in the volume of sulphate pulp mill operations, tall oil output should rise in 1955. The output of steam distilled rosin and turpentine in 1955 should be no greater than during the current year, owing to the dwindling supply of first growth long leaf pine stumps. Over all, there should be little change in total rosin and turpentine production in the crop year 1955.

Long Term Outlook

From the data shown in the tabulation below, it is apparent that domestic rosin production has been increasing and turpentine output decreasing slightly. The rosin increase reflects the expansion of the wood naval stores (including tall oil) industry which more than offsets the decline in gum output. Partial explanation of decreasing turpentine production is afforded by declining gum and steam distilled turpentine yields per barrel of gum and per ton of stumpwood. In the case of gum turpentine, the decline in the past 7 years has averaged 5 percent -- or more than one-half gallon of turpentine per standard barrel (435 lbs.) of crude gum.

FIGURE 8


ROSIN
SUPPLY
DISAPPEARANCE
THOUS. DRUMS (520 lbs. net)
CCC Stocks
Free Stocks 1/
Tall Oil Prod. 2/
Steam Dist. "
Gum Production
Exports
Domestic
4000
3000
2000
1000
0
1948 1949 1950 1951 1952 1953 1954 (Est.)
Crop Years Beginning April
1/ Including imports
2/ Resin Acid Content

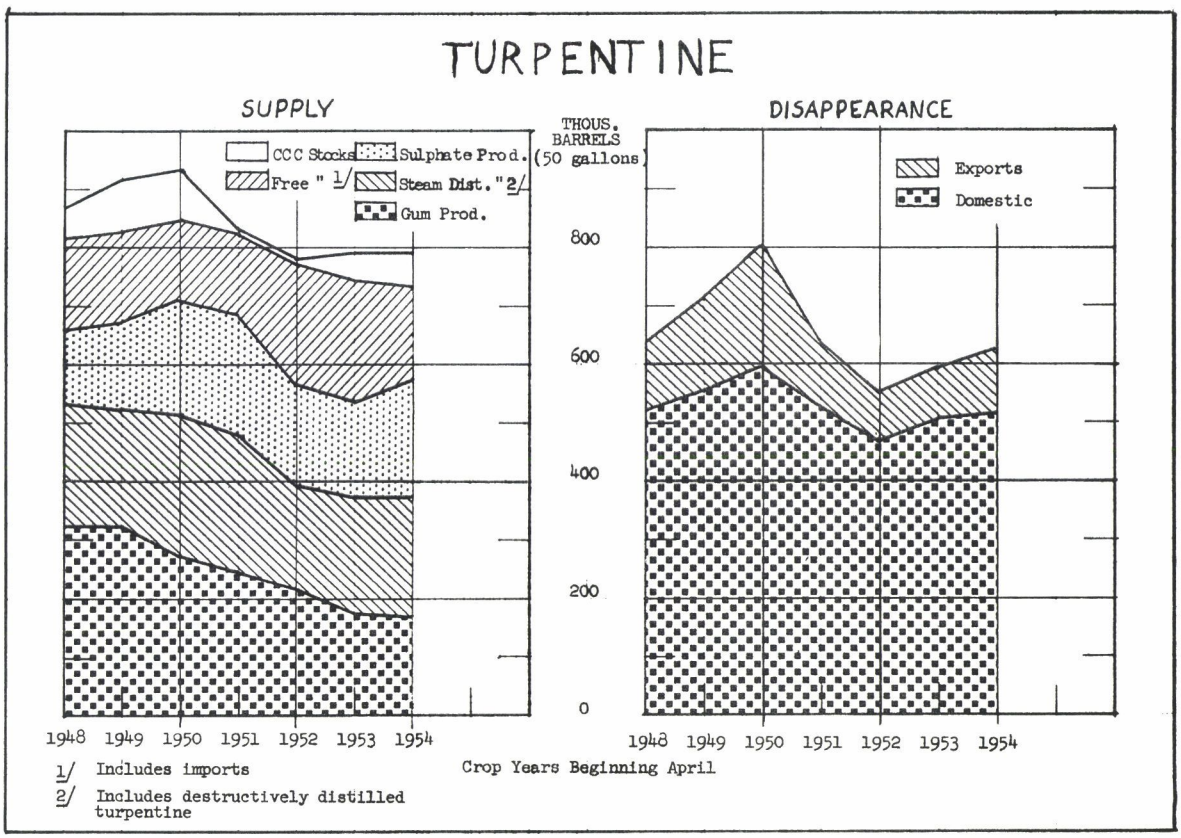

TURPENTINE
SUPPLY
DISAPPEARANCE
THOUS. BARRELS (50 gallons)
CCC Stocks
Sulphate Prod.
Free " 1/
Steam Dist. " 2/
Gum Prod.
Exports
Domestic
800
600
400
200
0
1948 1949 1950 1951 1952 1953 1954
Crop Years Beginning April
1/ Includes imports
2/ Includes destructively distilled turpentine

Table 5

Supplies and Requirements, Rosin and Turpentine
By Types, Crop Years 1948-49 through 1953-54 (Actual)
and 1954-55 (Estimated)

Crop Year Beginning April 1	Commodity and Type	SUPPLY: Carry-in Stocks 1/	SUPPLY: Production	SUPPLY: Imports	SUPPLY: Available supply	REQUIREMENTS: Domestic	REQUIREMENTS: Export	REQUIREMENTS: Total	Carry-out stocks
	Rosin (520 lb. Drums)								
1948	Gum	162,090 2/	921,220	1,071	1,084,381	370,583	236,228	606,811	477,570 2/
	S. D. Wood	115,890 2/	1,154,890	-0-	1,270,780	864,071	266,049	1,130,120	140,660 2/
	Tall Oil & Tall Oil Rosin 3/	39,408	214,500	-0-	253,908	188,570	24,325	212,895	41,013
	Total	317,388 2/	2,290,610	1,071	2,609,069	1,423,224	526,602	1,949,826	659,243 2/
1949	Gum	477,570 2/	924,900	4,229	1,406,699	347,152	256,927	604,079	802,620 2/
	S. D. Wood	140,660 2/	1,098,610	-0-	1,239,270	842,512	305,098	1,147,610	91,660 2/
	Tall Oil & Tall Oil Rosin 3/	41,013	191,473	-0-	232,486	153,026	28,331	181,357	51,129
	Total	659,243 2/	2,214,983	4,229	2,878,455	1,342,690	590,356	1,933,046	945,409 2/
1950	Gum	802,620 2/	797,620	4,475	1,604,715	550,584	595,591	1,146,175	458,540 2/
	S. D. Wood	91,660 2/	1,339,410	-0-	1,431,070	985,348	345,682	1,331,030	100,040 2/
	Tall Oil & Tall Oil Rosin 3/	51,129	316,144	-0-	367,273	282,466	39,618	322,084	45,189
	Total	945,409 2/	2,453,174	4,475	3,403,058	1,818,398	980,891	2,799,289	603,769 2/
1951	Gum	458,540 2/	716,350	1,980	1,176,870	392,190	293,140	685,330	491,540 2/
	S. D. Wood	100,040 2/	1,333,040	-0-	1,433,080	923,479	278,561	1,202,040	231,040 2/
	Tall Oil & Tall Oil Rosin 3/	45,189	323,546	-0-	368,735	258,489	37,260	295,749	72,986
	Total	603,769 2/	2,372,936	1,980	2,978,685	1,574,158	608,961	2,183,119	795,566 2/
1952	Gum	491,540 2/	638,360	3,000	1,132,900	312,563	138,577	451,140	681,760 2/
	S. D. Wood	231,040 2/	1,082,530	-0-	1,313,570	917,178	218,062	1,135,240	178,330 2/
	Tall Oil & Tall Oil Rosin 3/	72,986	267,033	-0-	340,019	239,611	28,208	267,819	72,200
	Total	795,566 2/	1,987,923	3,000	2,786,489	1,469,352	384,847	1,854,199	932,290 2/
1953	Gum	681,760 2/	531,620	1,410	1,214,790	348,050	132,100	480,150	734,640 2/
	S. D. Wood	178,330 2/	1,213,340	-0-	1,391,670	913,880	384,350	1,298,230	93,440 2/
	Tall Oil & Tall Oil Rosin 3/	72,200	273,752	-0-	345,952	240,133	35,825	275,958	69,994
	Total	932,290 2/	2,018,712	1,410	2,952,412	1,502,063	552,275	2,054,338	898,074 2/
1954	Gum	735,000 2/	520,000	1,000	1,256,000	340,000	180,000	520,000	736,000 2/
	S. D. Wood	93,000 2/	1,280,000	-0-	1,373,000	878,000	410,000	1,288,000	85,000 2/
	Tall Oil & Tall Oil Rosin 3/	70,000	320,000	-0-	390,000	270,000	60,000	330,000	60,000
	Total	898,000 2/	2,120,000	1,000	3,019,000	1,488,000	650,000	2,138,000	881,000 2/
	Turpentine (50 gal. bbls.)								
1948	Gum	87,390 2/	324,330	13,613	425,333	227,287	70,916	298,203	127,130 2/
	Wood (Total)	107,960 2/	334,810	-0-	442,770	294,442	45,768	340,210	102,560 2/
	S. D.	4/	207,160	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	124,870	-0-	4/	4/	4/	4/	4/
	D. D.	4/	2,780	-0-	4/	4/	4/	4/	4/
	Total	195,350 2/	659,140	13,613	868,103	521,729	116,684	638,413	229,690 2/
1949	Gum	127,130 2/	323,010	14,170	464,310	240,380	99,270	339,650	124,660 2/
	Wood (Total)	102,560 2/	350,280	-0-	452,840	315,256	56,284	371,540	81,300 2/
	S. D.	4/	199,630	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	147,500	-0-	4/	4/	4/	4/	4/
	D. D.	4/	3,150	-0-	4/	4/	4/	4/	4/
	Total	229,690 2/	673,290	14,170	917,150	555,636	155,554	711,190	205,960 2/
1950	Gum	124,660 2/	271,880	16,771	413,311	239,940	137,771	377,711	35,600 2/
	Wood (Total)	81,300 2/	436,670	-0-	517,970	354,117	70,693	424,810	93,160 2/
	S. D.	4/	237,080	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	194,180	-0-	4/	4/	4/	4/	4/
	D. D.	4/	5,410	-0-	4/	4/	4/	4/	4/
	Total	205,960 2/	708,550	16,771	931,281	594,057	208,464	802,521	128,760 2/
1951	Gum	35,600 2/	246,460	19,092	301,152	174,571	67,251	241,822	59,330 2/
	Wood (Total)	93,160 2/	437,500	-0-	530,660	352,286	43,254	395,540	135,120 2/
	S. D.	4/	229,590	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	203,430	-0-	4/	4/	4/	4/	4/
	D. D.	4/	4,480	-0-	4/	4/	4/	4/	4/
	Total	128,760	683,960	19,092	831,812	526,857	110,505	637,362	194,450 2/
1952	Gum	59,330 2/	217,360	19,636	296,326	173,084	43,042	216,126	80,200 2/
	Wood (Total)	135,120 2/	347,580	-0-	482,700	294,635	39,115	333,750	148,950 2/
	S. D.	4/	175,090	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	169,560	-0-	4/	4/	4/	4/	4/
	D. D.	4/	2,930	-0-	4/	4/	4/	4/	4/
	Total	194,450 2/	564,940	19,636	779,026	467,719	82,157	549,876	229,150 2/
1953	Gum	80,200 2/	177,680	22,830	280,710	156,500	34,880	191,380	89,330 2/
	Wood (Total)	148,950 2/	360,170	-0-	509,120	348,470	53,070	401,540	107,580 2/
	S. D.	4/	193,090	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	164,220	-0-	4/	4/	4/	4/	4/
	D. D.	4/	2,860	-0-	4/	4/	4/	4/	4/
	Total	229,150 2/	537,850	22,830	789,830	504,970	87,950	592,920	196,910 2/
1954	Gum	89,000 2/	172,000	19,000	280,000	155,000	35,000	190,000	90,000 2/
	Wood (Total)	108,000 2/	402,000	-0-	510,000	360,000	75,000	435,000	75,000 2/
	S. D.	4/	200,000	-0-	4/	4/	4/	4/	4/
	Sulphate	4/	200,000	-0-	4/	4/	4/	4/	4/
	D. D.	4/	2,000	-0-	4/	4/	4/	4/	4/
	Total	197,000 2/	574,000	19,000	790,000	515,000	110,000	625,000	165,000 2/

1/ Includes CCC and loan stocks.
2/ These are gross stocks and include turpentine and rosin sold and awaiting shipment.
3/ Resin Acid Equivalent
4/ No breakdown practicable from existing information.

Source: Data for crop years 1948 through 1953 derived from information released by the Agricultural Marketing Service, U.S.D.A., and Department of Commerce.

AGRICULTURE-WASHINGTON

Rosin and Turpentine
Production, Consumption and Exports, Averages
1922-31, 1932-41, and 1942-53

Crop yrs. begin. April	Production	Consumption	Exports
	Rosin 1/ (M drums)		
1922-31	1,766	811	972
1932-41	1,845	1,029	782
1942-53	1,970	1,515	500
	Turpentine (M Barrels)		
1922-31	626	357	267
1932-41	616	409	219
1942-53	589	501	121

1/ Including resin acid content of tall oil.

Because of the several kinds of naval stores production, it is probable that a realignment of output will occur. The future of steam distilled wood rosin is limited by dwindling supplies of first growth long leaf pine stumps. Because of lower yields and higher operating costs, substitution of ponderosa pine stumps in the western states as a basic raw material for steam distillation may prove non-feasible, except under higher price levels. However, decline in output of steam distilled wood rosin could be partially offset by rising sulphate pulp production and the consequent increase in crude tall oil recovery. Gum naval stores appear to be the only source of turpentine and rosin with a potential for vastly increased output. At present, barely 7 percent of the available trees suitable for gum production is being utilized.

The present low level of gum naval stores production results in large part from competition of alternative industrial and forestry enterprises. However, research is well under way on increased gum yields and reduced labor requirements. Good results in this respect already have been achieved. Eventually, it well may be that the production costs of gum naval stores will be reduced to a level which will encourage expanded output.

In the long run, turpentine supplies appear to be ample. The sulphate pulp industry has the potential for a greatly increased supply of refined sulphate turpentine.

Foreign Supplies. The resurgence of demand for naval stores in 1953 left foreign producing countries with much smaller stocks on January 1, 1954, than a year earlier.

Rosin and Turpentine Stocks
in Specified Foreign Producing Countries
January 1, 1953 and 1954

	Rosin Stocks (520 lb. Drums)			Turpentine Stocks (50 gal. Bbls.)	
	1953	1954		1953	1954
Portugal	130,000	22,000		52,000	28,000
France	32,000	38,000	1/	14,000	7,000
Spain	119,000	120,000		2/	2/
Mexico	38,000	10,000		5,000	5,000
Greece	17,000	8,000		6,000	8,000
Total	336,000	198,000		77,000	48,000

1/ Reported to have been largely liquidated by May 1, 1954.
2/ No information available

Source: Foreign Service dispatches and trade sources.

Because of adverse weather conditions in France and, to a lesser extent, Spain and Portugal, the increase in foreign output over the abnormally low 1953 production will be less than originally anticipated (see tabulation below).

Production of Rosin and Turpentine
in Specified Foreign Countries 1/
Calendar Years 1953 (Actual) and 1954 (Estimated)

Country	Rosin (M Drums) 1953	1954	Turp. (M Bbls) 1953	1954
France 2/	195	210	78	84
Portugal	97	150	33	51
Spain	122	115	50	47
Mexico	102	100	32	32
Greece	54	76	23	32
Sweden	59	60	37	38
Total	629	711	253	284

1/ Although the USSR is believed to be a substantial producer, no current information is available from this source.
2/ Crop year ending April 30, 1954.
Source: Foreign Service dispatches and foreign trade sources.

Moreover, because of a reduction in stocks, export availabilities are lower. A further reduction in stocks is expected during the current year so that export availabilities in 1955 from Portugal, France, Spain, Mexico, and Greece should be no greater than during the current year.

Requirements

Domestic Consumption. It is estimated that domestic consumption of rosin during the crop year 1954 will be about the same or very slightly below the level of last year. Turpentine consumption should be slightly higher than in 1953. Industrial utilization of turpentine is increasing. On the basis of consumption during the past 32 years, the long-term outlook for both rosin and turpentine consumption appears favorable. Rosin consumption follows the index of industrial production rather closely.

Exports. Exports of rosin and turpentine during the 1954 crop year are estimated to be about 18 and 25 percent, respectively, higher than last year.

Exports of crude pine gum to Japan which began in 1952, although on a small scale, have been increasing each year and may account for about 1 percent of the crude gum crop in 1954.

The anticipated increase in exports this year reflects lower export availabilities from foreign countries (mainly as a result of adverse weather and reduced carry-in stocks) and gradual industrial recovery and development abroad. Although the necessity for paying in dollars has tended to relegate American naval stores to a residual source of supply, the pressure on export supplies from the United States should be heavy this year.

Over a long period, exports of both rosin and turpentine have significantly declined. Unless there is a substantial increase in foreign production during the next few years, this trend may be halted or reversed.

Prices

Prices of gum rosin and turpentine since 1934 and the corresponding price support rates are shown in Table 6.

Both rosin and turpentine prices are expected to rise gradually at least through the remainder of the calendar year. Average gum rosin prices for the 1954 crop year as a whole should exceed those in 1953. No significant change is anticipated in the average 1954 gum turpentine price. Rosin and turpentine prices during the last half of the crop year 1954 (October 1954-March 1955) should, on the average, exceed those during the first 6 months of the crop year.

Table 6.

Gum Rosin and Gum Turpentine
Average market prices, average price support loan and purchase rates, crop years 1934 through 1953

Crop Year begin, April 1	ROSIN Market Prices 1/ ($ per 100 lbs net)	ROSIN Price Support Rate ($ per 100 lbs net)	TURPENTINE Market Prices ($ per gal. bulk)	TURPENTINE Price Support Rate ($ per gal. bulk)
1934	1.98	1.95	.396	.422
1935	1.97	1.95	.376	.422
1936	2.79	2/	.315	2/
1937	3.20	2/	.254	2/
1938	2.18	2.27	.166	.194
1939	2.37	2.44	.193	.197
1940	1.98	2.21	.240	.217
1941	2.42	2.28	.527	.287
1942	3.22	3.53	.591	.650
1943	3.97	3.65	.679	.676
1944	5.61	4.03 3/	.779	.740 3/
1945	6.50	3.89	.791	.720
1946	7.43	4.05	.967	.744
1947	7.83	6.35	.627	.608
1948	7.39	7.94	.428	.483
1949	6.47	6.78	.384	.400
1950	6.31	4.77	.551	.400
1951	8.73	7.37	.763	.500
1952	7.53	7.48	.534	.500
1953	7.72	7.44 4/	.516	.500

1/ Quotations of Savannah Cotton & Naval Stores Exchange (1934-50). Reports of Naval Stores Market News Service (1951-53).

2/ No program

3/ Represents purchase rates per 100 lbs. net basis K grade and per gallon bulk. Loan rates were lower ($3.82 on K grade rosin and $0.70 on turpentine). The program was inactive owing to higher market prices.

4/ Grades X-WG, $7.49, Grades N-I, $7.39.

Source: Average Market Price from AMS Annual Reports. Price Support data from CSS records.

The higher price level reflects the effect of adverse weather conditions on gum naval stores output in the United States, France, Spain, and Portugal, lower stocks, especially in foreign countries, and increased foreign requirements.

Because of the strong market situation, relatively small quantities of rosin and turpentine have been pledged to the CCC loan program. Much of the rosin has been redeemed and, at October 7, 30,517 drums of rosin (about 6 percent of the crop) and 13,342 barrels of turpentine (about 8 percent of production) remained unredeemed. This compares with 100,312 drums of rosin and 29,113 barrels of turpentine unredeemed on this date last year under the 1953 program.

It is anticipated that practically all of the rosin and much of the turpentine remaining pledged under the 1954 program will be redeemed. It is probable that sales will be made out of CCC reserve holdings of rosin acquired under prior programs.